

Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-25 (Cancelled).

26. (Currently Amended) A work station for simultaneously performing multiple assays, said work station comprising:

(a) a fixed first receiving structure adapted to receive and carry a receptacle holding structure for holding a plurality of receptacles, said first receiving structure being constructed and arranged to position a receptacle holding structure carried thereby so that receptacles held by the receptacle holding structure are arranged and oriented to be engageable by a substance transfer device for dispensing substances into or removing substances from two or more of the receptacles simultaneously;

(b) a fixed second receiving structure adjacent said first receiving structure and adapted to receive and carry a contamination limiting element holding structure for removably holding a plurality of contamination limiting elements which are operatively engageable by a substance transfer device to limit contact between the substance transfer device and a potentially contaminating substance removed by the substance transfer device from two or more receptacles, said second receiving structure being constructed and arranged to position a contamination limiting element holding structure carried thereby so that contamination limiting elements held by the contamination limiting element holding structure are positioned and oriented to permit a substance transfer device to operatively engage two or more of the contamination limiting elements simultaneously and remove the two or more contamination limiting elements from the contamination limiting element holding structure; and

(c) a substance transfer device positioning structure associated with said first and second receiving structures and constructed and arranged to:

(i) permit a substance transfer device to be manually positioned with respect to a contamination limiting element holding structure carried by said second receiving structure to allow the substance transfer device to simultaneously engage two or more

contamination limiting elements held by the contamination limiting element holding structure, and

(ii) permit a substance transfer device to be manually moved between said first and second receiving structures and to be manually positioned with respect to a receptacle holding structure carried by said first receiving structure to allow the substance transfer device to simultaneously dispense substances into or simultaneously remove substances from two or more receptacles held by the receptacle holding structure.

27. (Original) The work station of claim 26, further comprising:

a receptacle holding structure carried by said first receiving structure, said receptacle holding structure being constructed and arranged to hold a plurality of receptacles and to arrange and orient the receptacles so as to be engageable by a substance transfer device for dispensing substances into or removing substances from two or more of the receptacles simultaneously; and

a contamination limiting element holding structure carried by said second receiving structure, said contamination limiting element holding structure being constructed and arranged to removably hold a plurality of contamination limiting elements which are operatively engageable by a substance transfer device to limit contact between the substance transfer device and a potentially contaminating substance removed by the substance transfer device from two or more receptacles, said contamination limiting element holding structure being constructed and arranged to:

(i) receive and removably hold a plurality of contamination limiting elements in an operative orientation in which the contamination limiting elements can be operatively engaged by a substance transfer device, and

(ii) allow a substance transfer device to simultaneously engage two or more of the plurality of contamination limiting elements and allow the two or more contamination limiting elements engaged by the substance transfer device to be removed from the contamination limiting element holding structure.

28. (Original) The work station of claim 26, further comprising a substance transfer device constructed and arranged to:

(a) operatively interact with a first set of two or more of a plurality of receptacles held in a receptacle holding structure carried by said first receiving structure to simultaneously dispense substance into each of the two or more receptacles of the first set and to operatively interact with a second set of two or more of the plurality of receptacles held in the receptacle holding structure to simultaneously remove substance from each of the two or more receptacles of the second set, wherein said substance transfer device is constructed and arranged to simultaneously remove substance from each of the two or more receptacles of the second set at about the same time that said substance transfer device simultaneously dispenses substance into each of the two or more receptacles of the first set, and

(b) operatively engage two or more of a plurality of contamination limiting elements held by a contamination limiting element holding structure carried by said second receiving structure and to remove the two or more contamination limiting elements from the contamination limiting element holding structure,

said substance transfer device including guide members constructed and arranged to cooperate with said substance transfer device positioning structure to position said substance transfer device with respect to a contamination limiting element holding structure carried by said second receiving structure to allow said substance transfer device to operatively engage two or more contamination limiting elements held by the contamination limiting element holding structure, or to position said substance transfer device with respect to a receptacle holding structure carried by said first receiving structure to allow said substance transfer device to:

(i) simultaneously dispense substance into each of a first set of two or more receptacles held by the receptacle holding structure,

(ii) simultaneously remove substance from each of a second set of two or more receptacles held by the receptacle holding structure, or

(iii) simultaneously dispense substance into each of a first set of two or more receptacles held by the receptacle holding structure and simultaneously remove substance from each of a second set of two or more receptacles held by the receptacle holding structure at about the same time that said substance transfer device is simultaneously dispensing substance into each of the two or more receptacles of the first set.

29. (Original) The work station of claim 26, further comprising a substance transfer device constructed and arranged to:

(a) operatively interact with two or more of a plurality of receptacles held in a receptacle holding structure carried by said first receiving structure to simultaneously dispense substance into each of the two or more receptacles or to operatively interact with two or more of the plurality of receptacles held in the receptacle holding structure to simultaneously remove substance from each of the two or more receptacles, and

(b) operatively engage two or more of a plurality of contamination limiting elements held by a contamination limiting element holding structure carried by said second receiving structure and to remove the two or more contamination limiting elements from the contamination limiting element holding structure,

said substance transfer device including guide members constructed and arranged to cooperate with said substance transfer device positioning structure to position said substance transfer device with respect to a contamination limiting element holding structure carried by said second receiving structure to allow said substance transfer device to operatively engage two or more contamination limiting elements held by the contamination limiting element holding structure, or to position said substance transfer device with respect to a receptacle holding structure carried by said first receiving structure to allow said substance transfer device to:

(i) simultaneously dispense substance into each of two or more receptacles held by the receptacle holding structure, or

(ii) simultaneously remove substance from each of two or more receptacles held by the receptacle holding structure.

30. (Original) The work station of claim 26, further comprising:

a first substance transfer device constructed and arranged to operatively interact with two or more of a plurality of receptacles held in a receptacle holding structure carried by said first receiving structure to simultaneously dispense substance into each of the two or more receptacles,

said first substance transfer device including guide members constructed and arranged to cooperate with said substance transfer device positioning structure to position said first substance transfer device with respect to a receptacle holding structure carried by said first receiving structure to allow said substance transfer

device to simultaneously dispense substance into each of two or more receptacles held by the receptacle holding structure; and

a second substance transfer device constructed and arranged to operatively engage two or more of a plurality of contamination limiting elements held by a contamination limiting element holding structure carried by said second receiving structure and to remove the two or more contamination limiting elements from the contamination limiting element holding structure and to operatively interact with two or more of a plurality of receptacles held in a receptacle holding structure carried by said first receiving structure to simultaneously remove substance from each of the two or more receptacles,

said second substance transfer device including guide members constructed and arranged to cooperate with said substance transfer device positioning structure to position said substance transfer device with respect to a contamination limiting element holding structure carried by said second receiving structure to allow said substance transfer device to operatively engage two or more contamination limiting elements held by the contamination limiting element holding structure or to position said substance transfer device with respect to a receptacle holding structure carried by said first receiving structure to allow said substance transfer device to simultaneously remove substance from each of two or more receptacles held by the receptacle holding structure.

31. (Original) The work station of claim 27, further comprising a substance transfer device constructed and arranged to:

(a) operatively interact with a first set of two or more of a plurality of receptacles held in said receptacle holding structure to simultaneously dispense substance into each of the two or more receptacles of the first set and to operatively interact with a second set of two or more of the plurality of receptacles held in said receptacle holding structure to simultaneously remove substance from each of the two or more receptacles of the second set, wherein said substance transfer device is constructed and arranged to simultaneously remove substance from each of the two or more receptacles of the second set at about the same time that said substance transfer device simultaneously dispenses substance into each of the two or more receptacles of the first set, and

(b) operatively engage two or more of a plurality of contamination limiting elements held by said contamination limiting element holding structure and to remove the two or more contamination limiting elements from the contamination limiting element holding structure,

said substance transfer device including guide members constructed and arranged to cooperate with said substance transfer device positioning structure to position said substance transfer device with respect to said contamination limiting element holding structure to allow said substance transfer device to operatively engage two or more contamination limiting elements held by said contamination limiting element holding structure or to position said substance transfer device with respect to said receptacle holding structure to allow said substance transfer device to:

(i) simultaneously dispense substance into each of a first set of two or more receptacles held by said receptacle holding structure,

(ii) simultaneously remove substance from each of a second set of two or more receptacles held by said receptacle holding structure, or

(iii) simultaneously dispense substance into each of a first set of two or more receptacles held by said receptacle holding structure and simultaneously remove substance from each of a second set of two or more receptacles held by said receptacle holding structure at about the same time that said substance transfer device is simultaneously dispensing substance into each of the two or more receptacles of the first set.

32. (Original) The work station of claim 27, further comprising a substance transfer device constructed and arranged to:

(a) operatively interact with two or more of a plurality of receptacles held in said receptacle holding structure to simultaneously dispense substance into each of the two or more receptacles or to operatively interact with two or more of the plurality of receptacles held in said receptacle holding structure to simultaneously remove substance from each of the two or more receptacles, and

(b) operatively engage two or more of a plurality of contamination limiting elements held by said contamination limiting element holding structure and to remove the two or more contamination limiting elements from said contamination limiting element holding structure,

said substance transfer device including guide members constructed and arranged to cooperate with said substance transfer device positioning structure to position said substance

transfer device with respect to said contamination limiting element holding structure to allow said substance transfer device to operatively engage two or more contamination limiting elements held by said contamination limiting element holding structure or to position said substance transfer device with respect to said receptacle holding structure to allow said substance transfer device to:

- (i) simultaneously dispense substance into each of two or more receptacles held by said receptacle holding structure, or
- (ii) simultaneously remove substance from each of two or more receptacles held by said receptacle holding structure.

33. (Original) The work station of claim 27, further comprising:

a first substance transfer device constructed and arranged to operatively interact with two or more of a plurality of receptacles held in said receptacle holding structure to simultaneously dispense substance into each of the two or more receptacles,

said first substance transfer device including guide members constructed and arranged to cooperate with said substance transfer device positioning structure to position said first substance transfer device with respect to said receptacle holding structure to allow said substance transfer device to simultaneously dispense substance into each of two or more receptacles held by said receptacle holding structure; and

a second substance transfer device constructed and arranged to operatively engage two or more of a plurality of contamination limiting elements held by said contamination limiting element holding structure and to remove the two or more contamination limiting elements from said contamination limiting element holding structure and to operatively interact with two or more of a plurality of receptacles held in said receptacle holding structure to simultaneously remove substance from each of the two or more receptacles,

said second substance transfer device including guide members constructed and arranged to cooperate with said substance transfer device positioning structure to position said substance transfer device with respect to said contamination limiting element holding structure to allow said substance transfer device to operatively engage two or more contamination limiting elements held by said contamination limiting element holding structure or to position said substance transfer device with

respect to said receptacle holding structure to allow said substance transfer device to simultaneously remove substance from each of two or more receptacles held by said receptacle holding structure.

Claims 34-37 (Cancelled).

38. (New) The work station of claim 28, wherein said substance transfer device positioning structure comprises receptacle registration structure associated with said first receiving structure and contamination limiting element registration structure associated with said second receiving structure,

(a) said contamination limiting element registration structure being constructed and arranged to be selectively engaged by said guide members to thereby permit said substance transfer device to be positioned with respect to said second receiving structure to allow said substance transfer device to operatively engage the two or more contamination limiting elements, and

(b) said receptacle registration structure being constructed and arranged to be selectively engaged by said guide members to thereby position said substance transfer device with respect to any two or more of the receptacle sets held in a receptacle holding structure carried in the first receiving structure to permit said substance transfer device to:

(i) simultaneously dispense substance into each of the receptacles of a first receptacle set of the two or more receptacle sets,

(ii) simultaneously remove substance from each of the receptacles of the second receptacle set of the two or more receptacle sets, or

(iii) simultaneously dispense substance into each of the receptacles of the first receptacle set and simultaneously remove substance from each of the receptacles of the second receptacle set at about the same time that said substance transfer device is simultaneously dispensing substance into each of the receptacles of the first receptacle set.

39. (New) The work station of claim 38,
wherein said receptacle registration structure comprises a pair of elongated guide supports, one of said elongated guide supports being positioned on either side of said first receiving structure,

each of said elongated guide supports having a plurality of aligned, vertically extending guide holes formed therein, each of said guide holes of one of said pair of elongated guide supports being aligned with a corresponding guide hole of the other of said elongated guide supports, and

wherein said contamination limiting element registration structure comprises a pair of elongated guide supports, one of said elongated guide supports being positioned on either side of said second receiving structure, each of said elongated guide supports having a plurality of aligned, vertically extending guide holes formed therein, each of said guide holes of one of said pair of elongated guide supports being aligned with a corresponding guide hole of the other of said elongated guide supports, and

wherein said guide members comprise a pair of spaced, generally parallel guide rods extending from said substance transfer device,

wherein one of said guide rods is constructed and arranged to be inserted into a one of said guide holes of one of said elongated guide supports of said contamination limiting element registration structure and the other of said guide rods is constructed and arranged to be inserted into said corresponding aligned guide hole of the other of said elongated guide supports of said contamination limiting element registration structure to position said substance transfer device with respect to a contamination limiting element holding structure carried in said second receiving structure to allow said substance transfer device to operatively engage the two or more contamination limiting elements, and

wherein one of said guide rods is constructed and arranged to be inserted into a one of said guide holes of one of said elongated guide supports of said receptacle registration structure and the other of said guide rods is constructed and arranged to be inserted into said corresponding guide hole of the other of said elongated guide supports of said receptacle registration structure to position said substance transfer device with respect to a receptacle holding structure carried in said first receiving structure to allow said substance transfer device to:

- (i) simultaneously dispense substance into each of the receptacles of the first receptacle set,
- (ii) simultaneously remove substance from each of the receptacles of the second receptacle set, or
- (iii) simultaneously dispense substance into each of the receptacles of the first receptacle set and simultaneously remove substance from each of the receptacles of the

second receptacle set at about the same time that said substance transfer device is simultaneously dispensing substance into each of the receptacles of the first receptacle set.

40. (New) The work station of claim 27, further comprising:
a plurality of contamination limiting elements removably held by said contamination limiting element holding structure; and
a plurality of receptacles held by said receptacle holding structure.

41. (New) The work station of claim 27, said contamination limiting element holding structure comprising one or more cassettes for holding a plurality of contamination limiting elements, each said cassette comprising:
side walls which are spaced apart and generally parallel to one another;
end walls which are opposed to one another and extend between said side walls at opposite ends thereof; and
a top panel having a plurality of apertures formed therein for receiving a plurality of contamination limiting elements, each said aperture adapted to receive one of the plurality of contamination limiting elements.

42. (New) The work station of claim 41, wherein each said cassette further comprises a plurality of dividing walls which are spaced apart and extend between said side walls and, in combination with said side walls and said end walls, define a plurality of contamination limiting element compartments, wherein each said compartment is capable of housing one of the contamination limiting elements.

43. (New) The work station of claim 27, said contamination limiting element holding structure comprising one or more cassettes for holding a plurality of contamination limiting elements, each said cassette comprising:
a plurality of contamination limiting element-receiving tubes, each of said tubes having a channel formed therein for receiving a contamination limiting element and an opening for providing access to said channel;

a connecting structure holding said tubes together as an integral unit; and
a frustoconical surface surrounding said opening for facilitating alignment of a contamination limiting element with said opening.—

44. (New) The work station of claim 27, wherein said receptacle holding structure comprises a receptacle rack for holding a plurality of receptacles arranged in an array.

45. (New) The work station of claim 27, wherein said first receiving structure comprises a first well formed in a base structure, wherein said receptacle holding structure is constructed and arranged to be removably disposed within said first well.

46. (New) The work station of claim 27, wherein said contamination limiting element holding structure comprises a pipette tip rack for holding a plurality of pipette tips arranged in an array.

47. (New) The work station of claim 46, wherein said pipette tip rack comprises a top panel and upstanding sidewall structures supporting said top panel, said top panel having formed therein a plurality of slots arranged generally in parallel with one another, and wherein said contamination limiting element holding structure further comprises one or more cassettes for holding a plurality of contamination limiting elements, each of said one or more cassettes being constructed and arranged to be operatively positioned in an associated one of said slots formed in said top panel.

48. (New) The work station of claim 27, wherein said second receiving structure comprises a second well formed in a base structure, said contamination limiting element holding structure being constructed and arranged to be removably disposed within said second well.

49. (New) The work station of claim 28, wherein said substance transfer device comprises:
(a) an elongated central support member;
(b) a pair of upstanding handle members attached to and extending upwardly from said central support member proximate opposite ends thereof;
(c) a substance dispensing apparatus operatively mounted to said central support member and including two or more conduits, said substance dispensing apparatus being constructed and

arranged to simultaneously dispense substance from each of said two or more conduits of said substance dispensing apparatus into each of the two or more receptacles of the first set; and

(d) a substance removing apparatus operatively mounted to said central support member and including two or more conduits, said substance removing apparatus being constructed and arranged to simultaneously remove substance through each of said conduits of said substance removing apparatus from each of the two or more receptacles of the second set, wherein said substance removing apparatus is constructed and arranged to remove substance from each of the two or more receptacles of the second set at about the same time said substance dispensing apparatus is dispensing substance into each of the two or more receptacles of the first set.

50. (New) The work station of claim 45, further comprising a plurality of spaced, substantially parallel dividing walls extending laterally across a bottom portion of said first well so as to define a plurality of spaced, laterally extending, substantially parallel receptacle receiving troughs across said bottom portion of said first well for receiving therein portions of the plurality of receptacles held in said receptacle holding structure.

51. (New) The work station of claim 50, further comprising magnetic structures incorporated into or defining said dividing walls to create a magnetic field within said troughs so as to expose any substance contained within the plurality of receptacles received within said receptacle receiving troughs to said magnetic field.

52. (New) The work station of claim 26, further comprising magnet structure disposed within said first receiving structure and operatively positioned and oriented so as to expose a substance contained in the plurality of receptacles held in a receptacle holding structure carried in said first receiving structure to a magnetic field generated by said magnet structure.